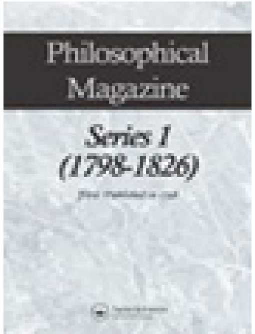

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XIV. Intelligence and miscellaneous articles

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The Board has been informed, that the true spring wheat may be sown successfully so late as the end of April. Several correspondents on the subject of the last harvest observed, that the spring wheat had escaped the mildew in parts of the country where the autumnal had not, and yielded better.

To the person who shall report to the Board the result of the most satisfactory experiments on spring wheat, which shall ascertain the soil, the sort of wheat, the time of sowing, the produce, and value, the comparative advantages of this and common wheat, and any other circumstances useful to be known, a piece of plate of the value of twenty pounds.

To be produced on or before the first Tuesday in April 1807.

XIV. *Intelligence and Miscellaneous Articles.*

VOYAGES AND TRAVELS.

St. Petersburgh, Dec. 31st.

Extract of a letter from Capt. Lieut. von Kreusenstern, commander of the ships Nadeshda and Neva, to the academician Schubert, dated the Harbour of St. Peter and St. Paul, in Kamtschatka, Aug. 8, 1804.

"On the 4th of February we left the island of St. Catherine and the coast of Brazil; on the 25th we discovered Staten Land; and on the 25th of March doubled Cape Horn. After entering the Great South Sea, or Pacific Ocean, we had stormy and cloudy weather, in consequence of which the two ships were separated, and did not meet till six weeks after, when they arrived at the Marquesas: on the 6th of May we saw Hood's island and some other islands to the north-west of the Marquesas; on the day following we anchored at the island Nukatera in the harbour of Anna Maria, a bay called by the natives Tayo Hoae. Three days after, that is on the 10th of May, the other ship the Neva entered also, after having cruised three days around Easter Island in search of us. In this island we discovered an excellent harbour, never before known, which has deep water close to the shore, and is so sheltered by the land that vessels can lie in calm water during the most boisterous winds. The inhabitants behaved exceedingly well, showed us every mark of attention, and the good understanding between us was never interrupted. The island, however, supplied only wood, fresh water, cocoanuts,

nuts, bananas, and some bread-fruit. In regard to provisions, we could with difficulty procure six swine, because the inhabitants had only a few themselves.

"On the 18th of May we left this island; and on the 25th crossed the equator in the 129th degree of west longitude.

"On the 7th of June we discovered the island Owhyhee, celebrated by the death of Capt. Cook, which is the southernmost and largest of the Sandwich islands. We sailed three days along the coast in order to procure fresh water from the inhabitants; but there is so great want of it in this island, and the inhabitants were so well supplied with iron articles, that they brought us only a sow, which they would not barter but for a cloke of the finest cloth. I therefore found myself under the necessity, on the 10th of June, of bearing away for Kamtschatka, especially as the slightest symptom of the scurvy or of any other disease had not manifested itself among the people, though they had lived so long on salt meat. The Neva remained some time longer at the Sandwich Isles.

"On the 11th of July we saw the coast of Kamtschatka, and on the afternoon of the 14th anchored in the harbour of St. Peter and St. Paul, thirty-four days after our departure from Owhyhee, and somewhat more than five months after we had left the coast of Brazil. The whole crew were in perfect health, and the rich lading destined for Kamtschatka was found in the best condition. Soon after our arrival the whole country experienced the beneficent consequences of this voyage. At our arrival, wretched brandy cost 20 roubles the can; at present the best is sold for 8; sugar cost 3½ roubles the pound; at present it costs 1¼ rouble; and other articles in the same proportion. On a proposal made by the worthy governor, General Koschelef, a subscription was opened for establishing a lazaretto and hospital, which in half an hour amounted to above 4000 roubles. I hope to be ready in ten days to put to sea, in order to convey our ambassador to Japan and then to bring him back hither. I shall then proceed to China, and thence perhaps return through the eastern passage to Europe."

Intelligence has since been received that the Nadeshda sailed from Kamstchatka to Japan on the 28th of August.

PALLADIUM.

We hear that Dr. Wollaston was the person who originally supplied Mrs. Foster with the palladium for sale. He gave a paper in the last volume of the Philosophical Transactions,

Transactions*, describing the other new metal, which he named *rhodium*, and showing that palladium might be got from crude platina. He had some years ago purchased a considerable quantity of platina with a view to make it malleable. In the course of his experiments he found out the palladium; but observing that there were yet many phænomena which could not be explained, he wished to secure his claim to the discovery without directing the attention of chemists to a subject he desired to investigate more fully. He afterwards detected the other new metal, rhodium, the presence of which unknown body was one cause of the difficulties which presented themselves. Having now finally completed the analysis of crude platina, we understand he intends to give a detailed account of its composition, and of such properties of the new metals as he has since been led to observe.

ORIGINAL VACCINE POCK INSTITUTION.

At the quarterly court held on the 29th January, a critical examination of Mr. Goldson's second pamphlet was read by Dr. Pearson. We are sorry our limits do not admit of our laying before our readers more than the concluding remark of Dr. Pearson, which was as follows:

"Dr. Pearson repeats his proposal to Mr. Goldson, of coming himself, or deputing two friends to the Vaccine Pock Institution, to decide the questioned facts by experiments, and lay the issue before the public. In the mean time Dr. Pearson, in the name of the institution in general, and his own in particular, returns his acknowledgment to Mr. Goldson for provoking the investigation of a subject which is so much wanted to obtain precision in practice, which has been checked hitherto by so many pretenders to knowledge of the subject, and who would wish it to be believed that the history of vaccine inoculation was exhausted by the publication of half a dozen instances of inoculated cases on the promulgation of the new practice. Dr. Pearson willingly concedes to Mr. Goldson, that a test of security is wanted for many of those who have been or shall be inoculated, because a criterion has been wanting to guide practitioners, and determine whether constitutional affection was produced or not; and that, admitting that even all the adverse cases published are cases of small-pox after cow-pock, which does not appear to be the truth, they will only serve to regulate practice in future; for the immense mass of evidence in favour of unsusceptibility of small-pox after the cow-pock demonstrates that the failures are more reasonably to be imputed to deceptions and deficiency of knowledge, than to exceptions to the law of the animal economy, that the vaccina produces unsusceptibility of the small-pox."

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* See Philosophical Magazine, vol. xix.

ENCOURAGEMENT OF LITERATURE AND SCIENCE.

The emperor of Russia, while he attends to the prosperity of the people whom he governs, seems anxious to promote, by his patronage, the cause of science every where, as being beneficial to the general interests of mankind.

Among recent instances of his munificence in this respect we have to record the following:

A prize question on gun-shot wounds having been proposed by the Royal College of Surgeons, Mr. Chevallier, surgeon, gained the medal, as the author of the best dissertation. The Emperor Alexander, in consequence, bestowed on him a diamond ring of considerable value*.

Dr. Thornton, author of the *Temple of Flora* and *Philosophy of Botany*, a work now publishing, has also been presented with a diamond ring from the Emperor of Russia, accompanied with the following letter:

"His Imperial Majesty the Emperor of Russia having, with much satisfaction, examined into the contents of your *splendid*, *elaborate*, and *useful* botanical work, has directed me to transmit to you the ring herewith sent, as a mark of his benevolence, and a proof of his regard for every thing which is of public utility.

"NOVOSSILZOFF,
"*Pres. of the Imper. Acad.*"

We have likewise learnt that the author of the Costumes of Russia has received a testimony of the munificence of the same potentate.

NATURAL HISTORY.

Count von Hoffmansegg, known by his travels through Portugal for improving natural history, obtained leave some years ago from the Prince regent of Portugal to send to Brazil a person named Sieber, well experienced in the science of natural history and in collecting the productions of nature, for the purpose of obtaining a series of observations in regard to that extensive country. Sieber proceeded, under the protection of the governor Count dos Arcos, to Para, where he has remained above a year. In a letter lately received from him, he gives the following testimonies respecting the *ayapana* (*eupatorium, ayapana*, Ventenat and Willdenow), which confirm the healing powers ascribed to that plant*, and render it more worthy the attention of physicians, as we have already obtained from the neighbourhood of the same district, ipecacuanha, quassia, and cantharides; the last of which are become indispensable in medicine.

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* Mr. Chevallier was also appointed surgeon extraordinary to his Royal Highness the Prince of Wales.

Para in Brazil, June 12th, 1804.

In regard to the celebrated plant ayapana, which is said to be an antidote to all poisons, I have made two experiments on myself. A soldier brought me a brown catterpillar covered with hair, an inch in length and intermixed with small prickles. I took it from the leaf into my hand, upon which the soldier cried out, "For God's sake take care, the caterpillar is poisonous." His exclamation however was too late: I received three pricks in the middle finger of the right hand, the finger appeared red, swelled, and became exceedingly painful. In a quarter of an hour the redness and swelling extended over the whole arm, and as far as the elbow, so that in half an hour I could scarcely move it; I recollected the ayapana, sent for it, expressed the juice, and applied it to my arm with some of the bruised plant: in two or three minutes the pain decreased; in half an hour I was able to bend my arm, and the next day I recovered the perfect use of it. The pricks in my finger, however, retained a dull pain for two days, but at the end of that time it went off.

The second trial was more disagreeable. A small scolopendra stung or bit me, while asleep in the night-time, in the forehead above the right eye; I immediately waked and searched for the animal, which I found next day and killed. As I could not in the night-time procure the plant, the poison before next morning had made a considerable progress: after applying the ayapana, the pain and inflammation went off; suppuration, however, I was not able to prevent; a corneous excrescence of above an inch in length arose on my forehead, and as I could not put on my hat I was obliged to remain four days in the house: the scar will still be apparent when I return.

My assistant was bitten in the woods in the right foot; at first he knew nothing of it, and felt no bad consequences till the evening of the following day, at which time he could not put on his shoe: after using the ayapana the inflammation and swelling subsided; it was not, however, possible to prevent suppuration. I was obliged to open the place, but in six days his foot was well.

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* See Philosophical Magazine, vol. xiii.

This beneficent plant must, where possible, be employed immediately after being bitten or pricked: its speedy action may then be traced; if applied later it removes the heat and swelling, and counteracts the effects of the poison, but connot prevent suppuration.

ASTRONOMY.

If astronomers are very anxious to determine the orbits of the planets lately discovered, their principal object is to ascertain their route, in order that they may be able to find them again when bad weather, or any other cause, has produced a long interruption of observations. This has been the case in regard to the new planet discovered by M. Harding: for a month we have not been able to see it; and it would have been impossible to find it again, in consequence of the great faintness of its light, had not its position been previously known. This observation succeeded on the 20th and 21st of December: it is the more important, as the planet is in that situation most favourable for determining its position from the sun. It has now passed over the twelfth part of its orbit; at the time of my preceding researches it had made only half that progress. These new elements, then, deserve more confidence. They, however, differ little from the former; for I have found nothing to be changed in the mean distance and in the revolution, which is four years four months, almost equal to that of the other two planets, Ceres and Pallas. But I have increased the eccentricity by a 70th part, so that it is determined that this new planet has the greatest eccentricity of all the planets known: the perihelion has been advanced to 24 minutes; the node and inclination have changed only a very few minutes.

The effect of this great eccentricity is so sensible, that the time employed by the planet to pass over the first part of its orbit, the middle of which is occupied by its aphelion, is the double of that necessary for completing the second half. In like manner, its greatest distance from the sun is almost double the least distance: in absolute measures the difference between these two distances is 45 millions of leagues, or equal to one and a third of the distance of the earth from the sun.

The planet is approaching the sun, and will not pass its perihelion till the 15th of February. This circumstance affords some hope that we shall still be able to observe it. I have therefore thought it might be useful and agreeable to astronomers to give the following ephemerides with the new elements:

Elements.

Ascending node - -	171° 6′ 0″
Inclination - -	13 5 0
Perihelion in 1805 -	59 49 33
Epoch (31 Dec. 1804, at noon)	42 17 23
Eccentricity - -	0·25096
Larger semi-axis - -	2·657
Revolution - -	1582 days.

Ephemerides.

		Longitude.	Latitude.
1804. Dec.	21	0° 43′	9° 40′ S.
	31	4 32	9 45
1805. Jan.	8	7 47	9 52
	16	11 18	9 57
	23	14 33	10 0
	31	18 27	10 0
Feb.	8	22 28	9 59
	15	26 8	9 58

BURCKHARDT,
Member of the Institute.

Dec. 25, 1804.

VOLCANOES.

Naples, Nov. 24, 1804.

Last night Vesuvius, which had been pretty tranquil for some weeks, suddenly began to excite attention. A smart shock of an earthquake was first felt: a column of flame of an astonishing height then issued from the crater; and this was followed by an abundant discharge of lava, which in three hours flowed beyond the boundaries to which that thrown up by the volcano three months ago had proceeded. The inhabitants of the mountain were thrown into the utmost consternation, and most of them fled with whatever they could carry with them. The greatest danger seemed to threaten the town of Torre del Greco, for the current of lava ran directly towards it; but it has not yet reached it: and this day the discharge of the lava has perceptibly decreased. The court is now at Portici, an elegant seat belonging to the king at the foot of Mount Vesuvius, and is resolved to remain there unless the danger becomes greater.

LIST

LIST OF PATENTS FOR NEW INVENTIONS,

Which have passed the Signet Office from Dec. 24, 1804, *to Jan. 24,* 1805.

To Thomas Hamilton Keddie, of Duke-street, Grosvenor-square, in the county of Middlesex, sadler, for a cartouch-box or receptacle for cartridges of gunpowder or gunpowder and ball for charging musquetry or artillery, or any other description of fire-arms.

To John Heppenstall, of Doncaster, in the county of York, machine-maker and engineer, for certain improvements in slivering, and preparing hemp, flax, and substitutes for hemp and flax, previous to the operation of spinning.

To John Robert Lucas, of Charlton-House, in the county of Somerset, Esq. for an improvement in the art or method of making, spreading, or flattening sheet-glass, commonly called German sheet-glass, or any other spread glass requiring a polished surface.

To Samuel Chifney, of Newmarket, in the county of Suffolk, rider, for certain improvements upon bitts of bridles.

To John Jones, of the city of Chester, chymist, for a liquor for printing or dyeing of cotton, linen, or woollen.

To William Lester, of Piccadilly, in the county of Middlesex, engineer, for certain improvements on an engine or machine for separating corn seeds and pulse from the straw.

To William Hackwood the younger, of Shelton, in the county of Stafford, potter, for a method of making windows and lights upon new principles.

To Edward Shorter, of New Crane, Wapping, in the county of Middlesex, mechanic, for certain mechanical apparatus, by which the raising of ballast is rendered more easy, cheap, and expeditious, and which may also be applied to other useful purposes.

To Simeon Thompson, of Red Cross Wharf, Upper Thames-street, in the city of London, coal-merchant, for a bushel or bushels and other measures upon a new construction for measuring coals, grain, seed, and other dry measurable commodities.

To John Ball, of the city of Norwich, engineer, for certain improvements in a machine for thrashing corn and pulse.

To Edward Thunder, of Brighthelmstone, in the county of Sussex, for an improved mode or method of keeping in tune certain musical instruments called piano fortes, grand piano fortes, harpsichords, spinets, and other stringed instruments.

METEOR-

METEOROLOGICAL TABLE

By Mr. Carey, of the Strand,

For February 1805.

Days of the Month.	Thermometer.			Height of the Barom. Inches.	Degrees of Dryness by Leslie's Hygrometer.	Weather.
	8 o'Clock, Morning.	Noon.	11 o'Clock, Night.			
Jan. 27	28°	29°	29°	29·70	10°	Fair
28	28	29	30	·50	7	Cloudy
29	29	34	32	·00	6	Fair
30	32	36	33	28·90	0	Rain
31	33	34	29	29·40	0	Snow and rain
Feb. 1	28	30	27	·78	6	Cloudy
2	21	34	31	·82	7	Fair
3	29	37	34	30·00	10	Fair
4	35	41	46	29·79	0	Rain
5	46	46	34	28·95	0	Stormy
6	29	35	32	29·82	6	Fair
7	32	41	40	·90	5	Showery
8	42	49	47	·65	8	Fair
9	49	53	49	·82	10	Fair
10	49	55	46	·72	7	Fair
11	44	44	35	·70	0	Rain
12	35	39	30	·91	16	Cloudy
13	30	39	28	30·20	18	Fair
14	28	38	34	29·99	15	Fair
15	33	38	34	30·04	18	Cloudy
16	32	42	30	·07	20	Fair
17	27	38	32	29·85	18	Fair
18	32	39	30	·80	19	Fair
19	28	40	30	·92	22	Fair
20	27	41	39	30·00	10	Fair
21	39	49	48	29·69	4	Rain
22	41	48	40	·78	11	Fair
23	41	49	44	30·04	21	Fair
24	46	48	40	29·78	0	Rain
25	38	47	44	·76	18	Fair

N. B. The barometer's height is taken at noon.